

I Claim:

1. A prosthesis to replace all or a portion of a caudal portion of a natural facet joint on a vertebral body comprising

5 a prosthesis body accommodating fixation to the vertebral body at or near a pedicle and without support by a lamina, and

an artificial facet joint structure carried by the prosthesis body adapted and configured to replace all or a portion of a caudal portion of a natural facet joint.

2. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint.

3. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of a lamina from the vertebral body.

4. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a mamillary process from the vertebral body.

5. A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a transverse process from the vertebral body.

6. A prosthesis according to claim 1 wherein the artificial facet joint structure

is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a pedicle from the vertebral body.

5 7. A prosthesis according to claim 1
 wherein the artificial facet joint structure
 is adapted and configured to replace a natural articular
 process of a caudal portion of a natural facet joint
 after removal of at least some of the natural articular
10 process from the vertebral body.

 8. A prosthesis according to claim 1
 wherein the artificial facet joint structure
 is adapted and configured to replace a natural articular
 process of a caudal portion of a natural facet joint
15 after removal of at least some of the natural articular
 process and of at least some of a lamina from the
 vertebral body.

 9. A prosthesis according to claim 1
 wherein the artificial facet joint structure
20 is adapted and configured to replace a natural articular
 process of a caudal portion of a natural facet joint
 after removal of at least some of the natural articular
 process and of at least some of a mamillary process from
 the vertebral body.

25 10. A prosthesis according to claim 1
 wherein the artificial facet joint structure
 is adapted and configured to replace a natural articular
 process of a caudal portion of a natural facet joint
 after removal of at least some of the natural articular
30 process and of at least part of a transverse process from
 the vertebral body.

 11. A prosthesis according to claim 1
 wherein the artificial facet joint structure
 is adapted and configured to replace a natural articular
35 process of a caudal portion of a natural facet joint

after removal of at least some of the natural articular process and of at least part of a pedicle from the vertebral body.

12. A prosthesis according to claim 1
5 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the
10 vertebral body.

13. A prosthesis according to claim 1
wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and
15 wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

14. A prosthesis according to claim 1
wherein the artificial facet joint structure
20 is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and wherein the prosthesis body is adapted and configured to replace at least some of a pedicle of the vertebral body.

15. A prosthesis according to claim 1
25 wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the vertebral body.

16. A prosthesis according to claim 1
30 wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

17. A prosthesis according to claim 1
35 wherein the prosthesis body is adapted and configured to replace at least some of a pedicle of the

vertebral body.

18. A prosthesis according to claim 1
wherein the artificial facet joint structure
is adapted and configured to articulate with a cephalad
5 portion of a facet joint of an adjoining vertebral body.

19. A prosthesis according to claim 1
wherein the artificial facet joint structure
is made of at least one selected prosthetic material.

20. A prosthesis according to claim 1
10 wherein the selected prosthetic material
includes polyethylene, rubber, tantalum, titanium, chrome
cobalt, surgical steel, bony in-growth material, ceramic,
artificial bone, or a combination thereof.

21. A method of replacing, on a vertebral
15 body, all or a portion of a caudal portion of a natural
facet joint using the prosthesis defined in claim 1 to
provide improved support for the spinal column, the
method comprising the steps of

(i) removing all or a portion of a natural
20 articular process of the caudal portion of the natural
facet joint from the vertebral body, and

(ii) fixing the prosthesis as defined in claim
1 to the vertebral body to replace the removed portion of
the natural articular process with the artificial facet
25 joint structure.

22. A method according to claim 21
further including a step of removing at least
some of the lamina from the vertebral body.

23. A method according to claim 21
30 further including a step of removing at least
part of a mamillary process from the vertebral body.

24. A method according to claim 21
further including a step of removing at least
part of a transverse process from the vertebral body.

35 25. A method according to claim 21

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further including a step of removing at least part of a pedicle from the vertebral body.